

## AMENDMENTS TO THE SPECIFICATION

Please replace the paragraphs on page 6, lines 7-22 of the Clean Version of the Substitute Specification filed as part of the Preliminary Amendment, with the following amended paragraphs.

- Further features and advantages will become more apparent from the detailed description of a preferred but not limiting embodiment of an active filter, shown in the accompanying drawings, in which:
- Figs. 1a, 1b and 1c show the circuit diagram of compensated active filters in accordance with the known art;
- Figs. 2-29 and 32 show several different embodiments of the active filter in accordance with the present invention;
- Figs. 30-31, 33-37 and 37a-37b show some circuit stages that can be used in the filter in accordance with the invention; and
- Figs. 38a, 38b and 38c show distribution histograms relating to the invention.

The active filter in accordance with the present invention is identified with reference numeral 1 in the accompanying figures. –

Please replace all of the paragraphs, starting at page 59, line 13 and ending at page 61, line 3 of the Clean Version of the Substitute Specification filed as part of the Preliminary Amendment, with the following amended paragraphs.

### **-- Analytical study of the "Q" dispersion**

In order to analytically prove the exceptional level of stability, in terms of selectivity, of the filter being the object of the invention, three histograms of the "Q" have been drawn up.

- The first one (Fig. 38a) relates to a normal biquadratic filter, with ideal operational amplifiers.
- The second one (Fig. 38b) refers to the same configuration but with real operational amplifiers ( $\mu$ a-741) and utilising a self-compensating solution of the invention (~~see Fig. 17(A)~~) (see Fig. 17).
- Finally, the third histogram (Fig. 38c) relates to a filter belonging to the same typology as the preceding ones, put in the same achievement conditions as the second one but with a configuration obtained with the technique of the active compensation of the poles, shown in Fig.

1c.

### **Analysis and interpretation of the histograms**

In order to process the three histograms, the computer has carried out the same number of Monte Carlo analyses, each comprising 392 A.C. simulations, calculating many of the values that the real "Q" can take, in each of the three filters; then the computer has drawn up the statistical distribution thereof, also carrying out a mathematical-statistical analysis the results of which are reproduced herein. –